



Release Notes for Cisco ONS 15600 Release 8.0

October 15, 2007



Note

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

Release notes address closed (maintenance) issues, caveats, and new features for the Cisco ONS 15600. For detailed information regarding features, capabilities, hardware, and software introduced with this release, refer to Release 8.0 of the *Cisco ONS 15600 Procedure Guide*, *Cisco ONS 15600 Reference Manual*, *Cisco ONS SONET TLI Command Guide*, and *Cisco ONS 15600 Troubleshooting Guide*. For the most current version of the Release Notes for Cisco ONS 15600 Release 8.0, visit the following URL:

<http://www.cisco.com/univercd/cc/td/doc/product/ong/15600/600relnt/index.htm>

Cisco also provides Bug Toolkit, a web resource for tracking defects. To access Bug Toolkit, visit the following URL:

http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl

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Changes to the Release Notes

This section documents supplemental changes that have been added to the *Release Notes for Cisco ONS 15600 Release 8.0* since the production of the Cisco ONS 15600 System Software CD for Release 8.0.

Following change has been made to the release notes for Release 8.0.

OC192/STM64 4 Port ITU C-Band Card is not supported in this release.

Caveats

Review the notes listed below before deploying the ONS 15600. Caveats with tracking numbers are known system limitations that are scheduled to be addressed in a subsequent release. Caveats without tracking numbers are provided to point out procedural or situational considerations when deploying the product.

Hardware

ONS-SE-2G-xx.x

The ONS-SE-2G-xx.x complies with performance criteria for all intra-facility fiber cables and connectors per Telcordia GR-326-CORE, Issue 3 Sept. 1999. Cisco recommends the following approved suppliers for intrafacility fiber cables to use with this product:

- Volex
- Fitel
- Sumitomo
- Fujikura
- Tyco

Maintenance and Administration



Caution

VxWorks is intended for qualified Cisco personnel only. Customer use of VxWorks is not recommended, nor is it supported by Cisco's Technical Assistance Center. Inappropriate use of VxWorks commands can have a negative and service affecting impact on your network. Please consult the troubleshooting guide for your release and platform for appropriate troubleshooting procedures. To exit without logging in, enter a Control-D (hold down the Control and D keys at the same time) at the Username prompt. To exit after logging in, type "logout" at the VxWorks shell prompt.

**Note**

When the Cisco ONS 15600 is used in the Data Communications Network (DCN) as a Gateway Network Element (GNE), Cisco Systems, Inc. recommends that:

- a. Each Cisco ONS 15600 GNE should cater to no more than 64 Data Communications Channels (DCC)-connected External Network Elements (ENE).
- b. No ENE should be more than 8 DCC hops away from its GNE.
- c. With large networks, the Cisco Transport Controller (CTC) Java Virtual Machine (JVM) Heap Size should be set to 512 MB (default is 128 MB).
- d. When running R7.2.1 and above, the ONS 15600 GNE should be declared a SOCKS proxy in CTC preferences.
- e. The number of simultaneous CTC sessions on the network should be limited to five.

CSCsd84932

When an ASAP card IPIO that has STS1 circuits on it is removed, the downstream NE will see UNEQ-P on the STS1 circuits instead of AIS-P, as expected. Concatenated circuits will see AIS-P, as expected. This issue does not occur with 4PIO removals, or with concatenated circuits. This issue will be resolved in a future release.

CSCsb96697

When you perform a Manual Switch To Protect and then an SD-L condition is raised on the Protect port that preempts the Manual Switch To Protect, the CTC Maintenance > Protection tab shows “APS_CLEAR.” When you click Clear in that tab while the SD-L is still present on the protect port, the K bytes will change to “No Request” for about 400-1000 frames before redeclaring the SD-L condition. This issue can occur on ONS 15600 ASAP cards with 1+1 protection. It does not affect other cards or protection schemes. This issue does not affect traffic. This issue can only occur when using the CTC Maintenance > Protection tab under the aforementioned conditions. To avoid this issue, do not click Clear when the CTC Maintenance > Protection tab shows “APS_CLEAR” and SD-L is present on the protect port. This issue will be resolved in a future release.

CSCeh84908

A CTC client session can disconnect from an ONS node during simultaneous deletion of large numbers of VT level circuits (3000+). Connectivity to the node will recover without any user action. If the condition persists, restart the CTC session to reconnect. This issue is under investigation.

CSCeg57163

ONS platforms support only a single OSPF virtual link. This issue will be resolved in a future release.

CSCdy58342

Network connectivity could be lost if a backbone area becomes segmented into multiple GNEs. This occurs only if multiple ONS 15600 nodes and routers are connected to the same LAN in OSPF area 0. If a link between two routers breaks, the CTC session connected to Router 1 will not be able to communicate with the ONS 15600 connected to Router 2. To resolve, you must repair the link between the routers or provide another form of redundancy in the network. This is as designed.

CSCdz07098

If OSPF on LAN is enabled with an area ID that is the same as the area ID of any of the DCC Links, CTC will not be able to discover any of the DCC Connected Nodes. To avoid this issue, set the OSPF on LAN area ID to an area other than any of those already occupied by a DCC link. This is as designed.

CSCdy25142

Equipment alarms are always reported based on the activity of the particular card, without taking card redundancy into consideration. Thus, an equipment alarm such as CTNEQPT-PB-0 may be raised against a line card as CR(SA) even though the traffic is protected. This issue will not be resolved.

CSCeb49407

Choosing certain qualities of RES settings in the CTC Provisioning tab, Timing subtab, may trigger a reference failure. Specifically, this can occur if you select the quality of RES level such that any of the following are true.

- $ST3 < RES < ST3E$
- $ST4 < RES < SMC$
- $RES < ST4$

When you then input an actual reference signal lower than ST3E quality, the failure is triggered. This issue will not be resolved.

CSCsd38344

Executing an SNMP Walk on `cerentGenericPmThresholdTable` on an ONS 15600 node with many cards causes Alarm CONTBUS-IO-B is raised unexpectedly.

CSCsg37635

ONS 15600 SDH is unreachable through CTC, during a system reset when performing an upgrade after the activate step but before the accept step. A system soft reset is a controlled sequence of soft resetting all the boards in the shelf. During the upgrade the introduction of this system reset causes communication problems with both TSCs; the system does not know which TSC is supposed to be active. There is a procedure for an upgrade where a shelf reset should not be done by the operator. There is no way for an automatic shelf reset to occur. On any power-down, the system comes up on the old code without any issues involved. A workaround is to avoid a system reset during upgrade process.

Optical IO Cards

CSCse08282

When the Active XC is removed, the traffic from the line card might be lost. If the line card is an ASAP card, the lack of traffic will cause a low transition signal density to enter the ASAP line card ASIC on the backplane egress interface. The downstream FPGA on the ASAP IPIO daughter card will begin detecting B1 errors. These B1 errors will cause unexpected path protection switches. These errors will also be reported as equipment failures.

To avoid this issue ensure that the Active XC is in OOS-MT state before removing it. If this issue does occur, reset the IPIO ASAP daughter card to clear the errored state. Resetting the ASAP carrier card will also clear the errored state. This issue will be resolved in a future release.

CSCsc51518

In ASAP card view, the PIM graphic might not update with the correct color after an alarm is cleared. This can occur anytime there is an alarm raised against the PIM or any of its subcomponents (PPM or port). To recover from this state, you must either click the Synchronize button, or change to node view and then back to card view. This issue will be resolved in a future release.

CSCef20813

No graphical representations of LEDs for ASAP ports are displayed in the CTC card view. SD and SF LED representations are also absent from the CTC node view for some legacy OCn cards. There are no plans to resolve this issue.

BLSR Functionality

CSCsd62731

When you create a circuit in IS,AINS state while a BLSR is in the switch state the circuit will not transition from IS/AINS to IS. To avoid this ensure that the BLSR is in a stable state before creating a circuit. This issue will be resolved in a future release.

CSCeh49665

Connections might still exist after circuit deletions on BLSR DRI rings for which the primary node is isolated. For BLSR DRI rings with several types of DRI circuits, if you isolate the primary node by deleting the database, reseal the I/O cards, then delete all BLSR DRI circuits, the SSXCs still show connections. To avoid this issue, do not delete or create BLSR DRI circuits when a node on the BLSR DRI ring is isolated. This issue will not be resolved.

Interoperability

CSCdx61916 and CSCeg20536

If, using CTC, you attempt to create a protected VT1.5 circuit that originates on one ONS 15454 that is connected to the ONS 15600 via path protection to another ONS 15454 that is connected to the ONS 15600 via 1+1 or BLSR, the circuit creation request will be denied because of mixed protection domains. CTC is currently incapable of routing VT circuits across the ONS 15600 when mixed protection schemes are involved. VT traffic can be routed across the ONS 15600 when mixed protection schemes are involved by performing the following:

-
- | | |
|--------|--|
| Step 1 | On the ONS 15600, create an STS level cross connect with the requisite path selectors. |
| Step 2 | Use CTC to create a VT circuit from the source node to the trunk ports that interface to the 15600. |
| Step 3 | Use CTC to create a VT circuit between the destination node and the trunk ports that interface with the 15600. |
-



Note

While this workaround provides the ability to route VT traffic across the ONS 15600 when mixed protection domains exist, the traffic must be managed as three separate circuits instead of one single end-to-end circuit.

This issue will be resolved in a future release.

CSCdy68110

When you attempt to configure VT circuits on a test configuration consisting of two ONS 15454 nodes and one ONS 15600 node, when both ONS 15454s are connected to the ONS 15600 node using a dual path protection connection configuration, and when the ONS 15600 node serves as an intermediate node between the two ONS 15454 nodes, you may be unable to create a VT circuit from one ONS 15454 to the ONS 15600 and then to the other ONS 15454. VT Tunnels are created, but the VT circuit is not created. A mixed protection domain error message is raised when this occurs. To avoid this issue, create the VT tunnels manually, so that the two tunnels do not create a topology where the working and protect tunnels share the same I/O card. After the tunnels have been created, the VT circuit can be successfully added. This issue will be resolved in future release.

CSCdx94969

Physical PM parameters can not be retrieved through the SNMP interface. MIBs released with the ONS 15600 do not have entries for the following physical PM parameters.

- LBC
- OPR
- OPT

The standard SONET Generic MIB does not have entries for these. To work around this issue, use CTC to retrieve the values. SNMP support for these parameters may be considered for a future release.

CSCdy54737

The following PM parameters can not be retrieved through SNMP.

- **Line:**
 - FC-L
- **Path:**
 - FC-P
 - PPJC-Pdet
 - NPJC-Pdet
 - PPJC-Pgen
 - NPJC-Pgen
- **Protection groups:**
 - PSC
 - PSD
- **Far End counts for line and path**
- **1-Day PM counts**

To retrieve these counts, use CTC. SNMP support for these parameters may be considered for a future release.

Bridge and Roll

CSCdy14265

The manual bridge and roll feature allows you to perform the END command once the roll operation transitions from a ROLL PENDING to ROLL condition, even if the roll to port has an invalid signal. To avoid traffic impact, ensure that the roll-to line is alarm-free. If an alarm exists, you can choose to do nothing and wait for the alarm to clear, to delete the roll, or to proceed in spite of the alarm. This issue will not be resolved.

Alarms

CSCsd52527

The AS-MT and the AS-CMD alarms do not show up on the alarm profile in CTC, so you cannot change the severity of these alarm using CTC. This issue will be resolved in a future release.

TL1

CSCsd59138

The wrong SSMs for additional references are displayed in the TL1 RTRV-SYCN command response for a 1+1 working line when that line is used as the primary reference for a node. References including SYNC-NE 2 and 3, and SYNC-BITS are incorrectly reported. To avoid confusion, use CTC to view the correct SSMs. This issue will be resolved in a future release.

CSCsb72582

You cannot perform an ENT-EQPT for a valid card type when the current equipment state is OOS-AUMA,MEA&UAS. When the fault PPM comes up as OOS-AUMA,MEA&UAS and then the ENT-EQPT command is entered using TL1, the command is rejected. This issue will be resolved in a future release.

CSCeb46234

A TL1 user cannot preprovision IO cards when a filler card is in the slot. Removal of the filler card will clear the slot and allow the TL1 user to preprovision the IO card. This is by design.

Resolved Caveats for Release 8.0

The following caveats were resolved in Release 8.0.

Maintenance and Administration

CSCsd45025

PPM hardware part numbers are displayed incorrectly in the inventory column. This issue is resolved in Release 8.0.

Optical Cards

CSCsd88186

A MFGMEM alarm might be incorrectly raised when using an ASAP card with the PIO4 with one SFP, then replacing that with a PIO1 and an XFP, then returning to the original configuration. When the alarm is mistakenly raised, it does not clear. You must remove and reinsert the SFP to clear the alarm. This issue is resolved in Release 8.0.

TL1

CSCsd52415

You cannot set the GIGE admin state to IS,AINS using the TL1 ED-GIGE command for the ONS 15600 ASAP card. The TL1 ED-GIGE command denies attempts to change the ADMIN state to IS,AINS this card. CTC, however, can execute the state change. This issue is resolved in Release 8.0.

CSCsd95331

The status field incorrectly displays IS-NR when performing a RTRV-EQPT TL1 command where the AID is of type PIM (Pluggable I/O Module) or PPM (Pluggable Port Module). Since PIMs and PPMs do not support equipment protection, the status field should display NA. This issue is resolved in Release 8.0.

CSCsg77314

Standby TSC deletes DB without a sync from Active TSC causing an outage on the default DB. If the Standby shelf controller reboots, by design it deletes its DB and syncs. If It cannot sync, it creates a default DB. If it is called upon to be the active shelf controller, traffic is dropped. This issue has been resolved in this release and in future releases.

CSCse40756

For multiple downloads, DNLD status is only updated for one node on network view. When downloading six 600 nodes at the same time, the download status field on CTC was updated properly on just one of the six 600 nodes. The workaround is to check-in the individual status of the download on each node. This issue is resolved in Release 8.0.

CSCsf01341

Some circuits might be displayed as PARTIAL after one or more ONS 15600SDH nodes is upgraded to Release 8.0 from Release 1.40. This can occur when the ONS 15600SDH has circuits with their drops on the ONS 15600SDH nodes. The workaround is to run "Circuit Reconfigure" on the affected PARTIAL circuits. This issue is resolved in Release 8.0.

New Features and Functionality

This section highlights new features and functionality for Release 8.0. For detailed documentation of each feature, consult the user documentation.

New Hardware Features

OC192/STM64 4 Port ITU C-Band Card

The OC192/STM64 4 Port ITU C-Band card provides four Telcordia GR-253-CORE compliant, SONET OC-192 ports per card. The ports operate at 9953.28 Mbps over single-mode fiber. The OC192/STM64 4 Port ITU C-Band card has four physical connector adapters with two fibers per connector adapter. The card supports STS-1 payloads and concatenated payloads at STS-3c, STS-12c, STS-24c, STS-48c, or STS-192c signal levels.

The OC192/STM64 4 Port ITU C-Band card features a tunable 1550-nm C-band laser on the trunk port. The laser is tunable across 82 wavelengths on the ITU grid with 50-GHz spacing between wavelengths.

OC192/STM64 4 Port ITU C-Band Card Slots and Connectors

You can install OC192/STM64 4 Port ITU C-Band cards in Slots 1 through 4 and 11 through 14. The card provides four bidirectional SC-type connector adapters on the faceplate (angled downward), carrying two fiber strands (one transmit and one receive). Only one transmit and receive pair is used per connector adapter. On a breakout cable, use port three with fiber 4 (transmit) and fiber 3 (receive).

Any Service Any Port (ASAP) Card New SFP

The ASAP card provides up to 16 Telcordia GR-253-CORE compliant, SONET OC-3, OC-12, OC-48, or Gigabit Ethernet ports, or up to 4 Telcordia GR-253-CORE compliant, SONET OC-192 ports, in any combination of line rates. The ASAP card, when used with the 4-Port I/O (4PIO) module, has up to 16 physical connector adapters (known as Small Form-factor Pluggables [SFPs]). The SFP ports operate at up to 2488.320 Mbps over a single-mode fiber. The ASAP card, when used with the 1-Port I/O (1PIO) module, has up to 4 physical connector adapters (known as 10Gigabit Small Form Factor Pluggables [XFPs]). The XFP ports operate at up to 9953.280 Mbps over a single-mode fiber. Both XFP and SFP physical connector adapters have two fibers per connector adapter (transmit [Tx] and receive [Rx]). The ASAP card supports STS-1 payloads and concatenated payloads at STS-3c, STS-6c, STS-9c, STS-12c, STS-24c, STS-48c and STS-192c signal levels. The ASAP card is interoperable with ONS 15454 E-Series, G-Series, and ML-Series Ethernet cards.

There are three major components to the ASAP card:

- Carrier card, which can be installed in Slots 1 through 4 and 11 through 14
- 4PIO and 1PIO modules, also called Pluggable Input/Output Module (PIMs), which plug into the ASAP carrier card
- SFPs/XFPs, called Pluggable Port Modules (PPMs) in CTC, which plug into the 4PIO or 1PIO (PIM) module and provide the fiber interface using a female LC connector

A new SFP is available for use on the ASAP card. It is the ONS-SI-2G-S1, which operates at OC48/STM16 rates.

Customer Access Panel

The Customer Access Panel (CAP or CAP2) is located in the middle on the rear of the shelf. The CAP and CAP2 provide an alarm pin field, timing, and LAN connections. The CAP or CAP2 plugs into the backplane using 2mm Hard Metric connectors with 752 pins and is held in place with one large captive bolt and multiple screws.

The CAP2 has the additional capability of providing provisionable power monitoring.



Note

The ONS 15600 supports only T1 (100 ohm) building integrated timing supply (BITS).

The ONS 15600 CAP and CAP2 provide the following features:

- BITS T1 (100 ohm) interfaces via wire-wrap pins.
- Two Ethernet interfaces via RJ-45 connectors with internal transformer isolation.
- An EIA/TIA-232 craft interface via DB-9 connectors. This interface is surge-protected and provides
- EMI filtering. Two interfaces are provided for redundancy.
- Four audio alarm interfaces via a DB-15 connector that is surge-protected and EMI-filtered. The audio alarm indication is provided by the Timing and Shelf Controller (TSC) card and this interface can receive a signal to disable the audio alarm.
- Four visual alarm interfaces via a DB-15 connector that is surge-protected and EMI-filtered. The visual alarm indication is provided by the TSC card and the signal is connected to the PDU where LEDs indicate the alarm status and severity.
- Environmental (external) alarms and controls (16 inputs and 16 outputs) via wire-wrap pins. The interface is surge-protected and provides isolation by using an opto-isolator for alarm inputs and relays for alarm outputs. By connecting to different wire-wrap pins on the CAP/CAP2, the alarm outputs can be configured for either normally open (NO) or normally closed (NC) operation. Alarms are initiated by shorting these contacts. The alarm input interface provides a pair of positive and negative wire-wrap pins.

The isolation and termination meet the intra-building lightning surge specification in Telcordia GR-1089. The CAP and CAP2 have –48 VDC monitoring with an I2C interface and nonvolatile memory to store the CAP/CAP2 revision information.

If the CAP/CAP2 fails, the node raises an EQPT alarm. You can replace the CAP/CAP2 on an in-service node without affecting traffic. To replace a CAP, refer to the *Cisco ONS 15600 Procedure Guide*. Always replace the CAP during a maintenance window.

New Software Features

SFP Management Completion

Supported services (rates, wavelengths, formats, reach, and so on) are encoded in the EEPROMs of SFPs and XFPs following industry standards. PPMs (SFPs or XFPs) that do not follow this standard cannot be read by the platform and are referred to as Unrecognized PPMs.

PPMs that are inserted into a card may be checked for the validity of an MD5 security code. PPMs failing this test are referred to as non-Cisco PPMs. PPMs passing this test as referred to in this document as Cisco PPMs.

Different cards are tested with a limited subset of Cisco PPMs. Customers are encouraged to use these PPMs, referred to as Qualified Cisco PPMs (for the particular card). Since each card supports different services (rates and formats), a PPM qualified for one card is not necessarily qualified for another. For example, a PPM qualified to work on a DWDM card may not be qualified to work on a SONET card. Cisco PPMs that are not recommended for use with a particular card are termed Unqualified Cisco PPMs (for the particular card).



Note

This feature may not be described in the Release 8.0 documentation

DISA Password Complexity, Max Password Length, Min Password Length.

The password length, by default, must be set to a minimum of six and a maximum of 20 characters. You can configure the default values in node view through Provisioning > NE Defaults > Node > security > passwordComplexity. The minimum length can be set to eight, ten or twelve characters, and the maximum length to 80 characters. The password must be a combination of alphanumeric (a-z, A-Z, 0-9) and special (+, #, %) characters, where at least two characters are nonalphabetic and at least one character is a special character. For TL1 compatibility, the password must be 6 to 10 characters. The password must not contain the user name.

Required JRE Version is 5.0

JRE version 5.0 was optional in Release 7.0. It is required for release 8.0 that JRE be version 5.0.

Solaris 10 Supported.

Solaris 10 is supported in release 8.0

Mozilla 1.7 Supported on Solaris 9 with Java plug-in 5.0.

Mozilla 1.7 on Solaris 9 with Java plug-in 5.0 is supported in release 8.0.

IPv6

Cisco ONS 15xxx products can function in an IPv6 network when an internet router that supports Network Address Translation - Protocol Translation (NAT-PT) is positioned between the GNE, such as an ONS 15454, and the client workstation. NAT-PT is defined in RFC-2766. IPv4 and IPv6 nodes communicate with each other using NAT-PT by allowing both IPv6 and IPv4 stacks to interface between the IPv6 DCN and the IPv4 DCC networks.

NAT-PT binds addresses in IPv6 networks with addresses in IPv4 networks and vice versa to provide transparent routing for the packets traveling between address types. This requires no changes to end nodes and IP packet routing is completely transparent to end nodes. It does, however, require NAT-PT to track the sessions it supports and mandates that inbound and outbound datagrams pertaining to a session traverse the same NAT-PT router. Protocol translation is used to extend address translation with protocol syntax/semantics translation.



Note

Only Mozilla 1.7 is supported on clients interfacing with IPv6 networks.

CTC Launcher 8.0

The CTC Launcher application is an executable file, StartCTC.exe, that is provided on Software Release 8.0 CDs for Cisco ONS products. You can use CTC Launcher to log into multiple ONS nodes that are running CTC Software Release 3.3 or higher, without using a web browser.

CTC Launcher provides two connection options. The first option is used to connect to ONS network elements (NEs) that have an IP connection to the CTC computer. The second option is used to connect to ONS NEs that reside behind third party, OSI-based gateway network elements (GNEs). For this option, CTC Launcher creates a TL1 tunnel to transport the TCP traffic through the OSI-based GNE.

The TL1 tunnel transports the TCP traffic to and from ONS ENEs through the OSI-based GNE. TL1 tunnels are similar to the existing static IP-over-CLNS tunnels GRE and Cisco IP that can be created at ONS NEs using CTC. (Refer to the Cisco ONS product documentation for information about static IP-over-CLNS tunnels.) However, unlike the static IP-over-CLNS tunnels, TL1 tunnels require no provisioning at the ONS ENE, the third-party GNE, or DCN routers. All provisioning occurs at the CTC computer when the CTC Launcher is started.

Open-Ended STS Circuits

CTC now has the ability to discover end-to-end virtual tributary (VT) circuits created over open-ended STS1 path circuits (Y-shaped) in "path protection -- (non-VTcapable node) -- LineProtected" configuration. These open-ended STS paths must be bidirectional. The creation of these open-ended STS circuits has to be done manually. They will not be created automatically during the creation of end-to-end VT circuits. Open-ended LoTunnels can also be created using TL1. CTC will discover such circuits and use them for end-to-end display of low-order circuits.

The protection type of VT circuits passing through these open-ended STS circuits is Unprotected. Automatic routing will not use these open-ended STS circuits for end-to-end VT circuit routing.

New TL1 Features

RTRV-PM-ALL for FEND and NEND

The Retrieve Performance Monitoring All (RTRV-PM-ALL) command retrieves the values of all the performance monitoring parameters for the specified AID. When the ALL AID is used, the response will include the PM parameters for all cards and ports in the chassis.

The format for the NEND and FEND input parameters is:

- FEND: Action occurs on the far end of the facility
- NEND: Action occurs on the near end of the facility

TL1 Command Changes

New Commands

The following new TL1 commands are added for Release 8.0.

- LIST
- DLT-NNI-ETH
- DLT-QNQ-ETH
- DLT-RMONTH-MOD2-DATA
- DLT-VLAN
- DLT-WDMSIDE
- ED-COS-ETH
- ED-ETH
- ED-L2-ETH
- ED-LMP
- ED-OTU2
- ED-QNQ-ETH
- ED-VLAN
- ED-WDMSIDE
- ENT-NNI-ETH
- ENT-QNQ-ETH
- ENT-VLAN
- ENT-WDMSIDE
- LMP-CTRL
- LMP-DLINK
- LMP-TLINK
- RTRV-COS-ETH
- RTRV-ETH
- RTRV-L2-ETH
- RTRV-NNI-ETH
- RTRV-PATH-OCH-TYPE
- RTRV-PM-ALL
- RTRV-QNQ-ETH
- RTRV-VLAN
- RTRV-WDMSIDE
- RTRV-WLEN

Removed Commands

The following commands were removed in Release 8.0.

- DLT-OSC
- ED-OSC
- ENT-OSC
- RTRV-OSC

Command Syntax Changes

The syntax of the following commands is changed in Release 8.0.

CHG-EQPT syntax changed:

```
CHG-EQPT[:<TID>]:<aid>:<CTAG>::<new_eqpt_type>;
```

```
CHG-EQPT[:<TID>]:<aid>:<CTAG>::<new_eqpt_type>[:PPMTYPE=<ppmtype>],[PPMNUM=<ppmnum>],[PORTNUM=<portnum>],[PORTRATE=<portrate>;
```

ED-APC syntax changed:

```
ED-APC[:<TID>]::<CTAG>[::APCENABLE=<apcenable>][:];
```

```
ED-APC[:<TID>]:<aid>:<CTAG>[::APCENABLE=<apcenable>][:];
```

The syntax of the following commands was changed from the last release:

(ALW-SWTOPROTN-EQPT enum changes:

DIRECTION)

(ALW-SWTOWKG-EQPT enum changes:

DIRECTION)

CHG-EQPT syntax changed: (454, 54 SDH)

```
CHG-EQPT[:<TID>]:<aid>:<CTAG>::<new_eqpt_type>;
```

```
CHG-EQPT[:<TID>]:<aid>:<CTAG>::<new_eqpt_type>[:PPMTYPE=<ppmtype>],[PPMNUM=<ppmnum>],[PORTNUM=<portnum>],[PORTRATE=<portrate>;
```

(CHG-EQPT enum changes:

EQUIPMENT_TYPE

PORTRATE)

(COPY-IOSCFG enum changes:

RFILE)

(DLT-RMONTH-MOD2-DATA enum changes
MOD2_DATA)

ED-APC syntax changed:

```
ED-APC[:<TID>]:<CTAG>[::APCENABLE=<apcenable>][:];
ED-APC[:<TID>]:<aid>:<CTAG>[::APCENABLE=<apcenable>][:];
```

(ED-BITS enum changes:

SYNC_CLOCK_REF_QUALITY_LEVEL)

(ED-E1 enum changes:

SYNC_CLOCK_REF_QUALITY_LEVEL)

ED-EQPT syntax changed:

```
ED-EQPT[:<TID>]:<aid>:<CTAG>[::PROTID=<protid>],[PRTYPE=<prtype>],[RVRTV=<rvrtv>],[
RVTM=<rvtm>],[CARDMODE=<cardmode>],[PEERID=<peerid>],[REGENNAME=<regenname>],[
CMDMDE=<cmdmde>],[RETIME=<retime>],[SHELFROLE=<shelfrole>],[NEWSHELFID=<newsh
elfid>][:<pst>[,<sst>]];
```

```
ED-EQPT[:<TID>]:<aid>:<CTAG>[::PROTID=<protid>],[PRTYPE=<prtype>],[RVRTV=<rvrtv>],[
RVTM=<rvtm>],[CARDMODE=<cardmode>],[PEERID=<peerid>],[REGENNAME=<regenname>],[
PEERNAME=<peername>],[CMDMDE=<cmdmde>],[RETIME=<retime>],[SHELFROLE=<shelfrole>
,<peername>],[NEWSHELFID=<newshelfid>],[FRPROLE=<frprole>],[FRPSTATE=<frpstate>][:<pst>[,<sst>]];
```

(ED-EQPT enum changes:

CARDMODE (454, 310MA, 310CL : Lotus20gCE2, Gt3CE2)
FRPROLE
FRPSTATE)

(ED-FAC enum changes:

PAYLOAD)

ED-FSTE syntax changed:

```
ED-FSTE[:<TID>]:<src>:<CTAG>[::FLOW=<flow>],[EXPDUPLICATION=<expduplex>],[EXPSPEED=<
expspeed>],[VLANCOS=<vlancostthreshold>],[IPTOS=<iptosthreshold>],[NAME=<name>],[CMDM
DE=<cmdmde>],[SOAK=<soak>][:<pst>[,<sst>]];
```

```
ED-FSTE[:<TID>]:<src>:<CTAG>[::FLOW=<flow>],[EXPDUPLICATION=<expduplex>],[EXPSPEED=<
expspeed>],[VLANCOS=<vlancostthreshold>],[IPTOS=<iptosthreshold>],[NAME=<name>],[CMDM
DE=<cmdmde>],[SUPPRESS=<suppress>],[SOAK=<soak>][:<pst>[,<sst>]];
```


ED-GIGE syntax changed:

```
ED-GIGE[:<TID>]:<aid>:<CTAG>:::[ADMINSTATE=<adminstate>],[LINKSTATE=<linkstate>],[MTU=<mtu>],[FLOWCTRL=<flowctrl>],[AUTONEG=<autoneg>],[HIWMRK=<hiwmrk>],[LOWMRK=<lowmrk>],[OPTICS=<optics>],[DUPLEX=<duplex>],[SPEED=<speed>],[NAME=<name>],[CMDMDE=<cmdmde>],[MACADDR=<macaddr>],[FREQ=<freq>],[LOSSB=<lossb>],[SOAK=<soak>]:[<pst>[,<sst>]];
```

```
ED-GIGE[:<TID>]:<aid>:<CTAG>:::[ADMINSTATE=<adminstate>],[LINKSTATE=<linkstate>],[MTU=<mtu>],[FLOW=<flow>],[FLOWCTRL=<flowctrl>],[AUTONEG=<autoneg>],[HIWMRK=<hiwmrk>],[LOWMRK=<lowmrk>],[OPTICS=<optics>],[DUPLEX=<duplex>],[SPEED=<speed>],[NAME=<name>],[CMDMDE=<cmdmde>],[MACADDR=<macaddr>],[FREQ=<freq>],[LOSSB=<lossb>],[SUPPRESS=<suppress>],[SOAK=<soak>],[SQUELCH=<squelch>],[CIR=<cir>],[CBS=<cbs>],[EBS=<ebs>]:[<pst>[,<sst>]];
```

(ED-G1000 enum changes:

ENCAP)

(ED-L2-ETH enum changes:

ETH_BRIDGESTATE

ETH_NIMODE

ETH_QNQMODE)

(ED-LMP enum changes:

OPSTATE

WDM_ROLE)

ED-NE-GEN syntax changed:

```
ED-NE-GEN[:<TID>]:<CTAG>[:::NAME=<name>],[IPADDR=<ipaddr>],[IPMASK=<ipmask>],[DEFRTR=<defrtr>],[IIOPORT=<iioport>],[NTP=<ntp>],[PROXYSRV=<isProxyServer>],[FIREWALL=<isFireWall>],[SUPPRESSIP=<mode>],[MODE=<mode>];
```

```
ED-NE-GEN[:<TID>]:<CTAG>[:::NAME=<name>],[IPADDR=<ipaddr>],[IPMASK=<ipmask>],[DEFRTR=<defrtr>],[IIOPORT=<iioport>],[NTP=<ntp>],[SUPPRESSIP=<mode>],[MODE=<mode>],[SERIALPORTECHO=<serialportecho>];
```

ED-NE-PATH syntax changed:

```
ED-NE-PATH[:<TID>]:<CTAG>[:::PDIP=<pdip>];
```

```
ED-NE-PATH[:<TID>]:<CTAG>[:::PDIP=<pdip>],[XCMODE=<xcmode>];
```

ED-OCH syntax changed:

```
ED-OCH[:<TID>]:<aid>:<CTAG>[::RDIRN=<rdirn>],[EXPWLEN=<expwlen>],[VOAATTN=<voaattn>],[VOAPWR=<voapwr>],[CALOPWR=<calopwr>],[CHPOWER=<chpower>],[NAME=<portname>],[SFBER=<sfber>],[SDBER=<sdber>],[OSDBER=<sdber>],[COMM=<comm>],[GCCRATE=<gccrate>],[DWRAP=<drwap>],[FEC=<fec>],[PAYLOADMAP=<payloadmap>],[MACADDR=<macaddr>],[SYNCSMSG=<syncmsg>],[SENDDUS=<senddus>],[SOAK=<soak>],[OSPF=<ospf>],[MFS=<mfs>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];
```

```
ED-OCH[:<TID>]:<aid>:<CTAG>[::EXPWLEN=<expwlen>],[VOAATTN=<voaattn>],[VOAPWR=<voapwr>],[CALOPWR=<calopwr>],[CHPOWER=<chpower>],[NAME=<portname>],[OSDBER=<sdber>],[GCC=<gcc>],[GCCRATE=<gccrate>],[DWRAP=<drwap>],[FEC=<fec>],[PAYLOADMAP=<payloadmap>],[SOAK=<soak>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];
```

(ED-OCH enum changes:

RDIRN_MODE)

(ED-OCHCC enum changes:

MOD2)

ED-OCHNC syntax changed:

```
ED-OCHNC[:<TID>]:<src>,<dst>:<CTAG>[::CKTID=<cktid>],[CMDMDE=<cmdmde>][:<pst>][,<sst>];
```

```
ED-OCHNC[:<TID>]:<src>,<dst>:<CTAG>[::CKTID=<cktid>],[CMDMDE=<cmdmde>],[WLOPWR=<wlopwr>],[VOAATTN=<voaattn>][:<pst>][,<sst>];
```

ED-OMS syntax changed:

```
ED-OMS[:<TID>]:<aid>:<CTAG>[::RDIRN=<rdirn>],[EXPBAND=<expband>],[VOAATTN=<voaattn>],[VOAPWR=<voapwr>],[CALOPWR=<calopwr>],[CHPOWER=<chpower>],[NAME=<name>],[SOAK=<soak>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];
```

```
ED-OMS[:<TID>]:<aid>:<CTAG>[::EXPBAND=<expband>],[VOAATTN=<voaattn>],[VOAPWR=<voapwr>],[CALOPWR=<calopwr>],[CHPOWER=<chpower>],[NAME=<name>],[SOAK=<soak>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];
```

(ED-OMS enum changes:

RDIRN_MODE)

ED-OTS syntax changed: (MultiShelf 454, 54 SDH)

```
ED-OTS[:<TID>]:<aid>:<CTAG>[:<RDIRN=<rdirn>,>],[VOAATTN=<voaattn>],[VOAPWR=<voapwr>],[OFFSET=<offset>],[CALTILT=<caltilt>],[OSRI=<osri>],[AMPLMODE=<amplmode>],[CHPOWER=<chpower>],[EXPGAIN=<expgain>],[NAME=<name>],[SOAK=<soak>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];
```

```
ED-OTS[:<TID>]:<aid>:<CTAG>[:<VOAATTN=<voaattn>,>],[VOAPWR=<voapwr>],[OFFSET=<offset>],[REFTILT=<reftilt>],[CALTILT=<caltilt>],[OSRI=<osri>],[AMPLMODE=<amplmode>],[CHPOWER=<chpower>],[EXPGAIN=<expgain>],[NAME=<name>],[SOAK=<soak>],[CMDMDE=<cmdmde>][:<pst>[,<sst>]];
```

(ED-OTS enum changes:

RDIRN_MODE)

(ED-OTU2 enum changes:

PMODE

REACH)

(ED-POS enum changes:

ENCAP)

(ED-QNQ-ETH enum changes:

ETH_RULE)

(ED-T1 enum changes:

SYNC_CLOCK_REF_QUALITY_LEVEL)

ED-WDMANS syntax changed:

```
ED-WDMANS[:<TID>]:<aid>:<CTAG>[:<POWERIN=<powerIn>,>],[POWEROUT=<powerOut>],[POWEREXP=<powerExp>],[NTWTYPE=<ringType>];
```

```
ED-WDMANS[:<TID>]:<aid>:<CTAG>[:<POWERIN=<powerIn>,>],[POWEROUT=<powerOut>],[POWEREXP=<powerExp>],[NTWTYPE=<ringType>],[PPMESH=<ppmesh>],[DITHER=<dither>];
```

(ED-WDMANS enum changes:

PPMESH)

(ENT-CKT-ORIG enum changes:

MOD_PATH)

(ENT-CKT-TERM enum changes:

MOD_PATH)

ENT-EQPT syntax changed:

```
ENT-EQPT[:<TID>]:<aid>:<CTAG>::<aidtype>[:PROTID=<protid>],[PRTYPE=<prtype>],[RVRTV=
<rvrtv>],[RVTM=<rvtm>],[CARDMODE=<cardmode>],[PEERID=<protid>],[REGENNAME=<rege
nname>],[CMDMDE=<cmdmde>],[TRANSMODE=<transmode>],[RETIME=<retime>],[SHELFROL
E=<shelfrole>][:];
```

```
ENT-EQPT[:<TID>]:<aid>:<CTAG>::<aidtype>[:PROTID=<protid>],[PRTYPE=<prtype>],[RVRTV=
<rvrtv>],[RVTM=<rvtm>],[CARDMODE=<cardmode>],[PEERID=<protid>],[REGENNAME=<rege
nname>],[CMDMDE=<cmdmde>],[TRANSMODE=<transmode>],[RETIME=<retime>],[SHELFROL
E=<shelfrole>],[FRPROLE=<frprole>],[FRPSTATE=<frpstate>][:];
```

(ENT-EQPT enum changes:

CARDMODE (454, 310MA, 310CL : Lotus20GCE2, Gt3CE2)

EQUIPMENT_TYPE (454, 454 SDH,310MA, 310CL : Lotus20GCE2, Gt3CE2)

FRPROLE

FRPSTATE)

WCT)

(ENT-QNQ-ETH enum changes:

ETH_RULE)

(ENT-VCG enum changes:

MOD_PATH) (454, 454 SDH : Lotus20gML2Lite)

(INH-SWTOPROTN-EQPT enum changes:

DIRECTION)

(INH-SWTOWKG-EQPT enum changes:

DIRECTION)

(LMP-CTRL enum changes:

OPSTATE)

(LMP-DLINK enum changes:

DATALINK

OPSTATE)

(LMP-TLINK enum changes:

MUXCAP
OPSTATE)

OPR-APC syntax changed:

OPR-APC[:<TID>]:<CTAG>;
OPR-APC[:<TID>]:<aid>:<CTAG>;

OPR-WDMANS syntax changed: (454, 454 SDH)

OPR-WDMANS[:<TID>]:<CTAG>;
OPR-WDMANS[:<TID>]:<CTAG>[:<MODE>=<mode>][<AGINGMARGIN>=<agingMargin>][:];

(OPR-WDMANS enum changes:

WDMANS_MODE)

RTRV-ALM-ALL syntax changed: (All platforms)

RTRV-ALM-ALL[:<TID>][:<aid>]:<CTAG>[:<ntfncde>][<condtype>][<srveff>][,,,];

RTRV-ALM-ALL[:<TID>][:<aid>]:<CTAG>[:<ntfncde>][<condtype>][<srveff>][<locn>][<dirn>][,];

RTRV-ALM-ALL response changes:

[<aid>],[<aidtype>]:<ntfncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,,[:<desc>],[<aiddet>]

[<aid>],[<aidtype>]:<ntfncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,[<location>],[<direction>]:[<desc>],[<aiddet>]

(RTRV-ALM-ALL enum changes:

DIRECTION
MOD2B)

RTRV-ALM-BITS syntax changed: (All platforms)

RTRV-ALM-BITS[:<TID>]:<aid>:<CTAG>[:<ntfncde>][<condtype>][<srveff>][,,,];

RTRV-ALM-BITS[:<TID>]:<aid>:<CTAG>[:<ntfncde>][<condtype>][<srveff>][<locn>][<dirn>][,];

RTRV-ALM-BITS response changes:

```
<aid>,[<aidtype>]:<ntfcncde>,<condtype>,<srveff>,[<ocrdat>],[<ocrtm>],,:[<desc>],
```

```
<aid>,[<aidtype>]:<ntfcncde>,<condtype>,<srveff>,[<ocrdat>],[<ocrtm>],[<location>],[<direction>]:  
[<desc>],
```

(RTRV-ALM-BITS enum changes:

DIRECTION

MOD2B)

RTRV-ALM-EQPT syntax changed: (All platforms)

```
RTRV-ALM-EQPT[:<TID>]:<aid>:<CTAG>[:<ntfcncde>],[<condtype>],[<srveff>][,,,];
```

```
RTRV-ALM-EQPT[:<TID>]:<aid>:<CTAG>[:<ntfcncde>],[<condtype>],[<srveff>],[<locn>],[<dirn>]  
][,];
```

RTRV-ALM-EQPT response changes:

```
[<aid>],[<aidtype>]:<ntfcncde>,<condtype>,<srveff>,[<ocrdat>],[<ocrtm>],[<stringValue>],:[<desc>]  
,
```

```
[<aid>],[<aidtype>]:<ntfcncde>,<condtype>,<srveff>,[<ocrdat>],[<ocrtm>],[<location>],[<direction>]  
]:[<desc>],
```

(RTRV-ALM-EQPT enum changes:

DIRECTION

MOD2B)

RTRV-ALM-SYNCN syntax changed: (All platforms)

```
RTRV-ALM-SYNCN[:<TID>]:<aid>:<CTAG>[:<ntfcncde>],[<condtype>],[<srveff>][,,,];
```

```
RTRV-ALM-SYNCN[:<TID>]:<aid>:<CTAG>[:<ntfcncde>],[<condtype>],[<srveff>],[<locn>],[<dir  
n>][,];
```

RTRV-ALM-SYNCN response changes:

```
<aid>,[<aidtype>]:<ntfcncde>,<condtype>,<srveff>,[<ocrdat>],[<ocrtm>],,:[<desc>],
```

```
<aid>,[<aidtype>]:<ntfcncde>,<condtype>,<srveff>,[<ocrdat>],[<ocrtm>],[<location>],[<direction>]:  
[<desc>],
```

(RTRV-ALM-SYNCN enum changes:

DIRECTION

MOD2B)

REPT^ALM^<MOD2ALM> response changes : (All platforms)

```
"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>]>,,:<desc>,<aiddet>]";
```

```
"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>]>,<locn>,<dirn>,,:<desc>,<aiddet>]";
```

REPT^ALM^BITS response changes: (All platforms)

```
"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>]:<desc>]";
```

```
"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,<locn>,<dirn>:<desc>]";
```

REPT^ALM^COM response changes: (All platforms)

```
"[<aid>]:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>]:<desc>]";
```

```
"[<aid>]:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,<locn>,<dirn>]:<desc>]";
```

REPT^ALM^EQPT response changes: (All platforms)

```
"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>]:<desc>,<aiddet>]";
```

```
"<aid>:<ntfcncde>,<condtype>,<srveff>,<ocrdat>,<ocrtm>,<locn>,<dirn>:<desc>,<aiddet>]";
```

Same response change applies to REPT^ALM^SYNCN

REPT^EVT^<MOD2ALM> response changes : (All platforms)

```
"<aid>:<condtype>,<condeff>,,,,<monval>,<thlev>,<tmper>]:<desc>,<aiddet>]";
```

```
"<aid>:<condtype>,<condeff>,,,,<locn>,<dirn>,<monval>,<thlev>,<tmper>]:<desc>,<aiddet>]";
```

REPT^EVT^BITS response changes: (All platforms)

```
"<aid>:<condtype>,<condeff>,,,,:<desc>]";
```

```
"<aid>:<condtype>,<condeff>,,,,,<locn>,<dirn>,<monval>,<thlev>,<tmper>]:<desc>]";
```

REPT^EVT^COM response changes: (All platforms)

```
"[<aid>]:<condtype>,<condeff>,,,,:<desc>]";
```

```
"[<aid>]:<condtype>,<condeff>,,,,<locn>,<dirn>,,,:<desc>]";
```

REPT^EVT^SECU response changes: (All platforms)

```
"<aid>:<condtype>,<condeff>,,,,:<security>:<msg>";
"<aid>:<condtype>,<condeff>,,,<locn>,<dirn>,,,<security>:<msg>";
```

REPT^EVT^EQPT response changes: (All platforms)

```
"<aid>:<condtype>,<condeff>,,,,:<desc>,<aiddet>";
"<aid>:<condtype>,<condeff>,,,,,<locn>,<dirn>:<desc>,<aiddet>";
```

Same response change applies to REPT^EVT^SYNCN

RTRV-APC syntax changed:

```
RTRV-APC[:<TID>]:<CTAG>[:];
RTRV-APC[:<TID>]:<aid>:<CTAG>[:];
```

RTRV-APC response changes:

```
::<apcenable>,<apcstate>;
<aid>::<apcenable>,<apcstate>;
```

RTRV-BITS response changes:

```
<aid>::<linecde>,<fmt>,<lbo>,<syncmsg>,<aisthrshld>,<saBit>,<bitsfac>,<admssm>[:<pst>]
<aid>::<linecde>,<fmt>,<lbo>,<syncmsg>,<aisthrshld>
[<saBit>,<impedance>,<bitsfac>,<admssm>] [<pst>]
```

(RTRV-BITS enum changes:

```
SYNC_CLOCK_REF_QUALITY_LEVEL)
```

(RTRV-CKT-ORIG enum changes:

```
MOD_PATH)
```

(RTRV-CKT-TERM enum changes:

```
MOD_PATH)
```

RTRV-COND-ALL syntax changed:

```
RTRV-COND-ALL[:<TID>]:<aid>:<CTAG>[:<typereq>][,,];
RTRV-COND-ALL[:<TID>]:<aid>:<CTAG>[:<typereq>,<locn>,<dirn>][,];
```


RTRV-COND-ALL response changes:

<aid>,[<aidtype>]:[<ntfcncde>],<typerep>,[<srveff>],[<ocrdat>],[<ocrtm>],,,[<desc>]

<aid>,[<aidtype>]:[<ntfcncde>],<typerep>,[<srveff>],[<ocrdat>],[<ocrtm>],[<location>],[<direction>],[<desc>]

(RTRV-COND-ALL enum changes:

DIRECTION

MOD2B)

RTRV-COND-BITS syntax changed:

RTRV-COND-BITS[:<TID>]:<aid>:<CTAG>[:<typereq>][,,,];

RTRV-COND-BITS[:<TID>]:<aid>:<CTAG>[:<typereq>],[<locn>],[<dirn>][,];

RTRV-COND-BITS response changes:

<aid>,[<aidtype>]:[<ntfcncde>],<typerep>,[<srveff>],[<ocrdat>],[<ocrtm>],,,[<desc>]

<aid>,[<aidtype>]:[<ntfcncde>],<typerep>,[<srveff>],[<ocrdat>],[<ocrtm>],[<location>],[<direction>],[<desc>]

(RTRV-COND-BITS enum changes:

DIRECTION

MOD2B)

RTRV-COND-EQPT syntax changed:

RTRV-COND-EQPT[:<TID>]:<aid>:<CTAG>[:<typereq>][,,,];

RTRV-COND-EQPT[:<TID>]:<aid>:<CTAG>[:<typereq>],[<locn>],[<dirn>][,];

RTRV-COND-EQPT response changes:

<aid>,[<aidtype>]:[<ntfcncde>],<typerep>,[<srveff>],[<ocrdat>],[<ocrtm>],,,[<desc>]

<aid>,[<aidtype>]:[<ntfcncde>],<typerep>,[<srveff>],[<ocrdat>],[<ocrtm>],[<location>],[<direction>],[<desc>]

(RTRV-COND-EQPT enum changes:

DIRECTION

MOD2B)

RTRV-COND-SYNCN syntax changed:

RTRV-COND-SYNCN[:<TID>]:<aid>:<CTAG>[:<typereq>][,,,];

RTRV-COND-SYNCN[:<TID>]:<aid>:<CTAG>[:<typereq>],[<locn>],[<dirn>][,];

RTRV-COND-SYNCN response changes:

<aid>,[<aidtype>]:<ntfcncde>,<typerep>,<srveff>,<ocrdat>,<ocrtm>,,,<desc>

<aid>,[<aidtype>]:<ntfcncde>,<typerep>,<srveff>,<ocrdat>,<ocrtm>,<location>,<direction>,
[,<desc>]

(RTRV-COND-SYNCN enum changes:

DIRECTION

MOD2B)

RTRV-DGN-EQPT response changes:

<aid>:

<slot>:

(RTRV-E1 enum changes:

DIRECTION

SYNC_CLOCK_REF_QUALITY_LEVEL)

(RTRV-E4 enum changes:

PAYLOAD)

RTRV-EQPT response changes:

<aid>:<aidtype>,<equip>,<role>,<status>:<protid>,<prtype>,<rvrtv>,<rvtm>,<cardname>,
<ioscfg>,<cardmode>,<peerid>,<regenname>,<transmode>,<retime>,<shelfrole>:<pst>,<sst>]

<aid>:<aidtype>,<equip>,<role>,<status>:<protid>,<prtype>,<rvrtv>,<rvtm>,<cardname>,
<ioscfg>,<cardmode>,<peerid>,<regenname>,<peername>,<transmode>,<retime>,<shelf
role>,<frprole>,<frpstate>:<pst>,<sst>]

(RTRV-EQPT enum changes:

RTRV-FSTE response changes:

```
<aid>::[<adminstate>],[<linkstate>],[<mtu>],[<flowctrl>],[<optics>],[<duplex>],[<speed>],[<flow>],[
<expduplex>],[<expspeed>],[<vlancosthreshold>],[<iptosthreshold>],[<name>],[<soak>],[<soakleft>]
:<pst>,<sst>]
```

```
<aid>::[<adminstate>],[<linkstate>],[<mtu>],[<flowctrl>],[<optics>],[<duplex>],[<speed>],[<flow>],[
<expduplex>],[<expspeed>],[<vlancosthreshold>],[<iptosthreshold>],[<name>],[<suppress>],[<soak>
],[<soakleft>]:<pst>,<sst>]
```

RTRV-GIGE response changes:

```
<aid>:.,<role>,<status>:[ adminstate>],[ linkstate>],[mtu>],[ encap>],[
flowctrl>],[<autoneg>],[hiwmrk>],[<lowmrk>],[<optics>],[<duplex>],[<speed>],
[<name>],[<freq>],[<lossb>],[<soak>],[<soakleft>],[<squelch>]:<pst>,<sst>;
```

```
<aid>:.,<role>,<status>:[ adminstate>],[ linkstate>],[mtu>],[ encap>],[<flow
>],[flowctrl>],[<autoneg>],[hiwmrk>],[<lowmrk>],[<optics>],[<duplex>],[<speed>],[<name>],[<freq
>],[<lossb>],[<suppress>],[<soak>],[<soakleft>],[<squelch>],[<cir>],[<cbs>],[<ebs>]:<pst>,<sst>;
```

(RTRV-G1000 enum changes:

ENCAP)

RTRV-INV response changes:

```
<aid>,<aidtype>::[<pn>],[<hwrev>],[<fwrev>],[<sn>],[<clei>],[<twl1=nwl in
code>],[<pluginvendorid>],[<pluginpn>],[<pluginhwrev>],[<pluginfwrev>],[<pluginsn>],[<i lossref>],
[<productId>],[<versionId>],[<fpgaVersion>],[<vendorId>]
```

```
<aid>,<aidtype>::[<pn>],[<hwrev>],[<fwrev>],[<sn>],[<clei>],[<twl>],[<pluginvendorid>],[<pluginp
n>],[<pluginhwrev>],[<pluginfwrev>],[<pluginsn>],[<i lossref>],[<productId>],[<versionId>],[<fpgaV
ersion>],[<vendorId>],[<moduletype>]
```

(RTRV-L2-ETH enum changes:

ETH_BRIDGESTATE

ETH_NIMODE

ETH_QNQMODE)

(RTRV-NE-APC enum changes:

MOD2)

RTRV-NE-GEN response changes :

```
[IPADDR=<ipaddr>],[IPMASK=<ipmask>],[DEFRTR=<defrtr>],[IIOPPORT=<iioport>],[NTP=<ntp>],[ETHIPADDR=<ethipaddr>],[ETHIPMASK=<ethipmask>],[NAME=<name>],[SWVER=<swver>],[LOAD=<load>],[PROTSWVER=<protswver>],[PROTLOAD=<protload>],[DEFDESC=<defdesc>],[PLATFORM=<platform>],[SECUMODE=<secumode>],[SUPPRESSIP=<suppressip>],[MODE=<mode>]
```

```
[IPADDR=<IPADDR>],[IPMASK=<IPMASK>],[DEFRTR=<DEFRTR>],
```

```
[IIOPPORT=<IIOPPORT>],[NTP=<NTP>],[ETHIPADDR=<ETHIPADDR>],
```

```
[ETHIPMASK=<ETHIPMASK>],[NAME=<NAME>],[SWVER=<SWVER>],[LOAD=<LOAD>],
```

```
[PROTSWVER=<PROTSWVER>],[PROTLOAD=<PROTLOAD>],[DEFDESC=<DEFDESC>],
```

```
[PLATFORM=<PLATFORM>],[SECUMODE=<SECUMODE>],[SUPPRESSIP=<SUPPRESSIP>],
```

```
[PROXYSRV=<PROXYSRV>],[FIREWALL=<FIREWALL>],[AUTOPM=<AUTOPM>],
```

```
[SERIALPORTECHO=<SERIALPORTECHO>
```

RTRV-NE-PATH response changes:

```
<rvtm>
```

```
<pdip>,<loxcmode>
```

RTRV-NE-SYNCN response changes:

```
[<aid>]:[<tmmd>],[<ssmgen>],[<qres>],[<rvrtv>],[<rvtm>]
```

```
[<aid>]:[<tmmd>],[<ssmgen>],[<qres>],[<rvrtv>],[<rvtm>],[<systemn>]
```

(RTRV-NE-SYNCN enum changes:

```
SYSTEM_TIMING)
```

(RTRV-OTS enum changes:

```
RDIRN_MODE
```

```
WDMANS_FLAG)
```

(RTRV-PM-ALL enum changes:
DIRECTION)

(RTRV-QNQ-ETH enum changes:
ETH_RULE)

(RTRV-STM1E enum changes:
PAYLOAD)

(RTRV-TH-ALL enum changes:
MOD2B)

(RTRV-TRC-OC48 enum changes:
MOD_PATH)

RTRV-VC syntax changed:
RTRV-VC[:<TID>]:<aid>:<CTAG>[::BLSRPHTHTYPE=<blsrpthtype>][:];
RTRV-VC[:<TID>]::<CTAG>;

(RTRV-VC enum changes:
PRODUCT_TYPE)

(RTRV-WLEN enum changes:
WCT)

(SW-TOPROTN-EQPT enum changes:
DIRECTION)

(SW-TOWKG-EQPT enum changes:
DIRECTION)

TL1 ENUM Changes

TL1 ENUM Items Added or Removed

The following section highlights ENUM items changed (added or removed) for Release 8.0, by ENUM type.

AUTOPM_TMPER

AUTOPM_TMPER enum added with the following items in it (all platforms):

AUTOPM_TMPER_NONE
AUTOPM_TMPER_15MIN
AUTOPM_TMPER_1DAY
AUTOPM_TMPER_BOTH

BURST_SIZE

BURST_SIZE enum items added (454, 454 SDH):

BURST_SIZE_128K => "128K"
BURST_SIZE_16K => "16K"
BURST_SIZE_16M => "16M"
BURST_SIZE_1M => "1M"
BURST_SIZE_256K => "256K"
BURST_SIZE_2M => "2M"
BURST_SIZE_32K => "32K"
BURST_SIZE_4K => "4K"
BURST_SIZE_4M => "4M"
BURST_SIZE_512K => "512K"
BURST_SIZE_64K => "64K"
BURST_SIZE_8K => "8K"
BURST_SIZE_8M => "8M"

BURST_SIZE is used in the following commands:

ED-GIGE
RTRV-GIGE

DIRECTION

DIRECTION enum items added (454, 454 SDH, 310 MA, 310 CL, 600, 600 SDH):

DIRECTION_TD_NA => "NA"

DIRECTION is used in the following commands:

ALW-SWTOPROTN-EQPT

ALW-SWTOWKG-EQPT

EX-SW-OCN-BLSR

INH-SWTOPROTN-EQPT

INH-SWTOWKG-EQPT

INIT-REG-MOD2

OPR-PROTNSW-OCN-TYPE

RLS-PROTNSW-OCN-TYPE

RTRV-ALM-ALL

RTRV-ALM-BITS

RTRV-ALM-EQPT

RTRV-ALM-MOD2ALM

RTRV-ALM-SYNCN

RTRV-COND-ALL

RTRV-COND-BITS

RTRV-COND-EQPT

RTRV-COND-MOD2ALM

RTRV-COND-SYNCN

RTRV-E1

RTRV-PM-ALL

RTRV-PM-MOD2

SW-TOPROTN-EQPT

SW-TOWKG-EQPT

ENCAP

ENCAP enum items added to (454, 454 SDH, 310 MA, 310 CL, 600 SDH):

ENCAP_RPR_GFP_F => "RPR-GFP-F"

ENCAP is used in the following commands:

ED-G1000

ED-POS

RTRV-FC

RTRV-G1000

RTRV-POS

EQPT_TYPE

EQPT_TYPE enum items dropped:

EQPT_TYPE_EQPT_ID_ML2_EXIGE_MAPPER_CARD => "CE-100T-8"

EQPT_TYPE enum items added:

EQPT_TYPE_EQPT_ID_OC192_4_DWDM => "OC192-4-DWDM" (600, 600 SDH)

EQPT_TYPE_EQPT_ID_PIM_1_PPM => "PIM-1" (600 SDH)

EQUIPMENT_TYPE

EQUIPMENT_TYPE enum items dropped:

EQUIPMENT_TYPE_ET_ML2_EXIGE_MAPPER_CARD => "CE-100T-8"

EQUIPMENT_TYPE enum items added:

EQUIPMENT_TYPE_ET_40_DMX_C => "40-DMX-C" (454, 454 SDH)

EQUIPMENT_TYPE_ET_OC192_4_DWDM => "OC192-4-DWDM" (600,600 SDH)

EQUIPMENT_TYPE_ET_PIM_1 => "PIM-1" (600 SDH)

EQUIPMENT_TYPE_ET_STM16_16 => "STM16_16" (600 SDH)

EQUIPMENT_TYPE_ET_STM64_4 => "STM64_4" (600 SDH)

EQUIPMENT_TYPE_ET_STM64_4_DWDM => "STM64-4-DWDM" (600, 600 SDH)

EQUIPMENT_TYPE

EQUIPMENT_TYPE is used in the following commands:

CHG-EQPT

ENT-EQPT

OPTICAL_NODE_TYPE

OPTICAL_NODE_TYPE enum items added:

OPTICAL_NODE_TERMINAL => "TERMINAL"

OPTICAL_NODE_TYPE is used in the following commands:

RTRV-WDMANS

PAYLOAD

PAYLOAD enum items dropped:

PAYLOAD_PT_ETHER => "ETHERNET"

PAYLOAD enum items added:

PAYLOAD_PT_ETHER => "ETH" (454, 454 SDH, 310 MA, 310CL, Lotus20gCE2, Gt3CE2)

PAYLOAD_PT_ILK => "ILK"

PAYLOAD_PT_OCH => "OCH"

PAYLOAD_PT_OTU2 => "OTU2"

PAYLOAD is used in the following commands:

ED/RTRV-FAC

ED/RTRV-E4

ED/RTRV-STM1E

PMMODE

PMMODE enum items added:

PMMODE_PROPRIETARY => "PROPRIETARY"

PMMODE_STD => "STD"

PMMODE is used in the following commands:

ED/RTRV-OTU2

PRODUCT_TYPE

PRODUCT_TYPE enum items added: (600 SDH):

PRODUCT_TYPE_NE_15600SDH => "ONS15600SDH"

PRODUCT_TYPE is used in the following commands:

RTRV-MAP-NETWORK

RTRV-VC

REACH

REACH enum items added:

REACH_CWDM => "CWDM"

REACH_DWDM => "DWDM"

REACH_ZR => "ZR"

REACH is used in the following commands:

ED-DWDM-CLNT

ED-FC

ED-GIGE

ED-OCH

ED-OCN-TYPE

ED-OTU2

RTRV-DWDM-CLNT

RTRV-FC

RTRV-GIGE

RTRV-OCH

RTRV-OCN-TYPE

RTRV-OTU2

REGULATED_PORT_TYPE

REGULATED_PORT_TYPE enum items added:

REGULATED_PORT_MISSING_PARAM => "MISSING-PARAM"

REGULATED_PORT_TYPE is used in the following commands:

RTRV-NE-WDMANS

REPTPM_TYPE

REPTPM_TYPE enum added with the following items in it (all platforms)

REPTPM_TYPE_NONE

REPTPM_TYPE_AUTO

REPTPM_TYPE_SCHED

REPTPM_TYPE_BOTH

REPTPM_TYPE

REPTPM_TYPE is used in the following commands:

SCHED-PMREPT-<MOD2>

SYNC_CLOCK_REF_QUALITY_LEVEL

SYNC_CLOCK_REF_QUALITY_LEVEL enum items added:

SYNC_CLOCK_REF_QUALITY_LEVEL_QREF_SSM_FAILED => "SSM-FAILED"

SYNC_CLOCK_REF_QUALITY_LEVEL is used in the following commands:

ED-BITS
ED-E1
ED-OCN-TYPE
ED-T1
RTRV-BITS
RTRV-E1
RTRV-OCN-TYPE
RTRV-SYNCN
RTRV-T1

SYSTEM_TIMING

SYSTEM_TIMING enum items added:

SYSTEM_TIMING_SDH => "SDH"

SYSTEM_TIMING_SONET => "SONET"

SYSTEM_TIMING is used in the following commands:

ED-NE-SYNCN
RTRV-NE-SYNCN

VALIDITY

VALIDITY enum items dropped:

VALIDITY_CV_OFF => "OFF"

VALIDITY enum items added:

VALIDITY_CV_OFF => "NA"

VALIDITY is used in the following commands:

RTRV-PM-MOD2

WCT

WCT enum items added:

WCT_DIAG => "DIAG"

WCT_TWOWAYDCN => "2WAYDCN"

WCT is used in the following commands:

ENT-OCHNC
RTRV-OCHNC
RTRV-WLEN

Related Documentation

Release-Specific Documents

- *Release Notes for the Cisco ONS 15600, Release 7.2*
- *Release Notes for the Cisco ONS 15454 SDH, Release 8.0*
- *Release Notes for the Cisco ONS 15600 SDH, Release 8.0*
- *Release Notes for the Cisco ONS 15454, Release 8.0*
- *Release Notes for the Cisco ONS 15310-CL, Release 8.0*
- *Release Notes for the Cisco ONS 15310-MA, Release 8.0*
- *Cisco ONS 15600 Software Upgrade Guide, Release 8.0*

Platform-Specific Documents

- *Cisco ONS 15600 Procedure Guide*
Provides installation, turn up, test, and maintenance procedures
- *Cisco ONS 15600 Reference Manual*
Provides technical reference information for SONET/SDH cards, nodes, and networks
- *Cisco ONS 15600 Troubleshooting Guide*
Provides a list of SONET alarms and troubleshooting procedures, general troubleshooting information, and hardware replacement procedures
- *Cisco ONS SONET TL1 Command Guide*
Provides a comprehensive list of TL1 commands

Obtaining Optical Networking Information

This section contains information that is specific to optical networking products. For information that pertains to all of Cisco, refer to the [Obtaining Documentation, Obtaining Support, and Security Guidelines](#) section.

Where to Find Safety and Warning Information

For safety and warning information, refer to the *Cisco Optical Transport Products Safety and Compliance Information* document that accompanied the product. This publication describes the international agency compliance and safety information for the Cisco ONS 15454 system. It also includes translations of the safety warnings that appear in the ONS 15454 system documentation.

Cisco Optical Networking Product Documentation CD-ROM

Optical networking-related documentation, including Cisco ONS 15xxx product documentation, is available in a CD-ROM package that ships with your product. The Optical Networking Product Documentation CD-ROM is updated periodically and may be more current than printed documentation.

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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